



EFFECTIVENESS OF MODULAR APPROACH IN TEACHING TECHNICAL WRITING AMONG SECOND YEAR CRIMINOLOGY STUDENTS OF ISU

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ABSTRACT

The researcher used a two-group Pre-test/ Post-Test Quasi-experimental Design to determine the perceived effectiveness of modular approach in teaching Technical Writing among Second year Bachelor of Science in Criminology students of Isabela State University- Cauayan, specifically, it sought to determine the profile of the respondents in terms of age, sex, and type of school graduated from; the academic performance of the students in Technical Writing; the significant difference in the academic performance of the students in the two groups and the reactions of the students on the use of the module in terms of content, organization, label, presentation of concepts, and exercises.

The results show that most of the respondents of the study (70 or 83.3%) were aged 17-18; most of them were 52 (61.9%) males and most of them 83 (98.8%) graduated in a public school; and there is a significant difference between the pre-test and post-test achievement scores of students and the students' who were taught without module got a higher pre-test mean score than that of the students with module. The students with module (experimental group) got a higher post-test mean score than that of the students without module (control group), thus implies that the use of learning modules enhanced the learning of the students and that modular instruction is better than the traditional method of teaching and there is no significant difference between the scores of with module (experimental group) and without module (control group) students thus affirms that the effectiveness of the modular instructional materials cannot be totally attributed to the module; however, when tested, it manifested a significantly different performance among those students and that the use of module is as effective as the usual traditional lecture discussion method.

The result also shows that the students perceived that the use of the Technical Writing Module is said to be very effective as it with regards to content, organization, label, presentation of concepts, and exercises and that instructional modules are primary vehicles for delivering content knowledge to students.

Based on the findings, it was concluded that aside from the module itself, there are other factors like the teacher factor, and the groupings of the students that could contribute to the high performance of students in Technical Report Writing, instructional modules are primary vehicles for delivering content knowledge to students and the use of instructional modules greatly enhance learning.

KEYWORDS: module, student achievement, writing, profile

INTRODUCTION

The importance of Instructional Materials in any teaching and learning process cannot be over emphasized. This is for the fact that such materials enhance, facilitate and make teaching and learning easy, lively and concrete. Instructional Materials as the name suggests, are materials of visual, audio and audio - visual category that helps to make concepts abstracts and ideas concrete in the teaching/learning process. They are also materials which the teacher uses in supplementing his teachings. Instructional Materials include materials used to facilitate learning for better results; likewise, it is the use of the chalkboard, manuals, books, charts, models, overhead projectors, films, television and computers in teaching process. In order to ensure an effective teaching learning process, it is important for the teacher to be thoroughly acquainted with the teaching resources and services available to him. The components of instructional materials available to teachers and

students are in large numbers and also vary according to the functions of each of them.

English plays a vital role in the academic performance of the students. As an international language, it is a "must-learn" language. To be globally competitive, to amount something in one's profession, to meet the demands and survive the pressures of college, one must learn to speak and write Standard English adequately. In this age of information and globalization, students are exposed to a rapid advancement in every aspect of life. There is a great demand to develop learning and thinking skills to enable us to cope with, change. Unfortunately, students' communication skills have been steadily deteriorating. Thus, when students get into college, their language deficiencies make coping a very difficult task.

Student's ability to express themselves in English is one of the most important skills. Their ability to express, with the use of appropriate words, styles, can provide self-confidence



and can contribute to the success in all areas where communication is a must. Here, in many varied situations, students give away a part of themselves on the bases of how they speak and how they write. However, writing is one of the difficult skills for many students. They would rather speak than write thinking that it has a lot of considerations and would need a lot of readings before they could write. (Wilczynski, 2009) College instructors, particularly those teaching English are aware of this fact. They recognize that the serious inability of students to read with comprehension and to express themselves orally and in writing, as well as their insufficient vocabulary, is, indeed a critical cause for concern. Willoughby (2000) mentioned that innovation in teaching of English is needed because the world is changing. An English teacher plays an important role in the innovation of teaching English. As classroom managers, they are the ones in-charge in the selection and the use of instructional materials which they think will help them achieve the desire instructional goals. In recent years; administrators in different institutions have focused their attention in their performance of the schools. They aimed to quality education by giving quality instruction to produce quality and competent graduates for them to be globally recognized.

The same vision is shared by the Isabela State University Cauayan Campus. As a growing University, they face the challenge of delivering quality education to their students. That is why there is a great effort to improve students' skills. There are many factors that affect the performance of the students. One of these is the use of instructional materials like modules in teaching English. Today, people are expecting so much from the graduates of Criminology in terms of theories and practices and techniques which they learned from when they are in school. However, often times Criminology Interns assigned to write are not prepared.

Aware of the academic performance of the students in Technical Writing, the researcher was motivated to develop

module in English particularly Technical Writing for Criminology and the target group are the 2nd year BS Criminology students. This was another attempt to try innovative approaches/strategies in teaching English using the modular form of teaching, for it believed that the modular approach is very effective in optimizing learning English. This approach allows students to understand concepts, principles and procedures. This may help to improve the teaching competencies of the faculty and to come up within Enhancement program to the student's needs.

The study entitled "Effectiveness of Modular Approach in Teaching Technical Writing among Second Year Criminology Students of ISU" aimed to determine the perceived effectiveness of modular approach in teaching Technical Writing among Second year Bachelor of Science in Criminology students of Isabela State University- Cauayan.

Specifically, it sought to answer the following questions:

1. What is the profile of the respondents in terms of:
 - 1.1 Age
 - 1.2 Sex
 - 1.3 Type of School Graduated
2. What is the academic performance of the students in Technical Writing in the experimental and control groups before and after the use of the instructional module?
3. Is there a significant difference in the academic performance of the students in the two groups before and after the use of the instructional module?
4. What are the reactions of the students on the use of the module in terms of:
 - a. Content
 - b. Organization
 - c. Label
 - d. Presentation of concepts
 - e. Exercises

Conceptual Framework

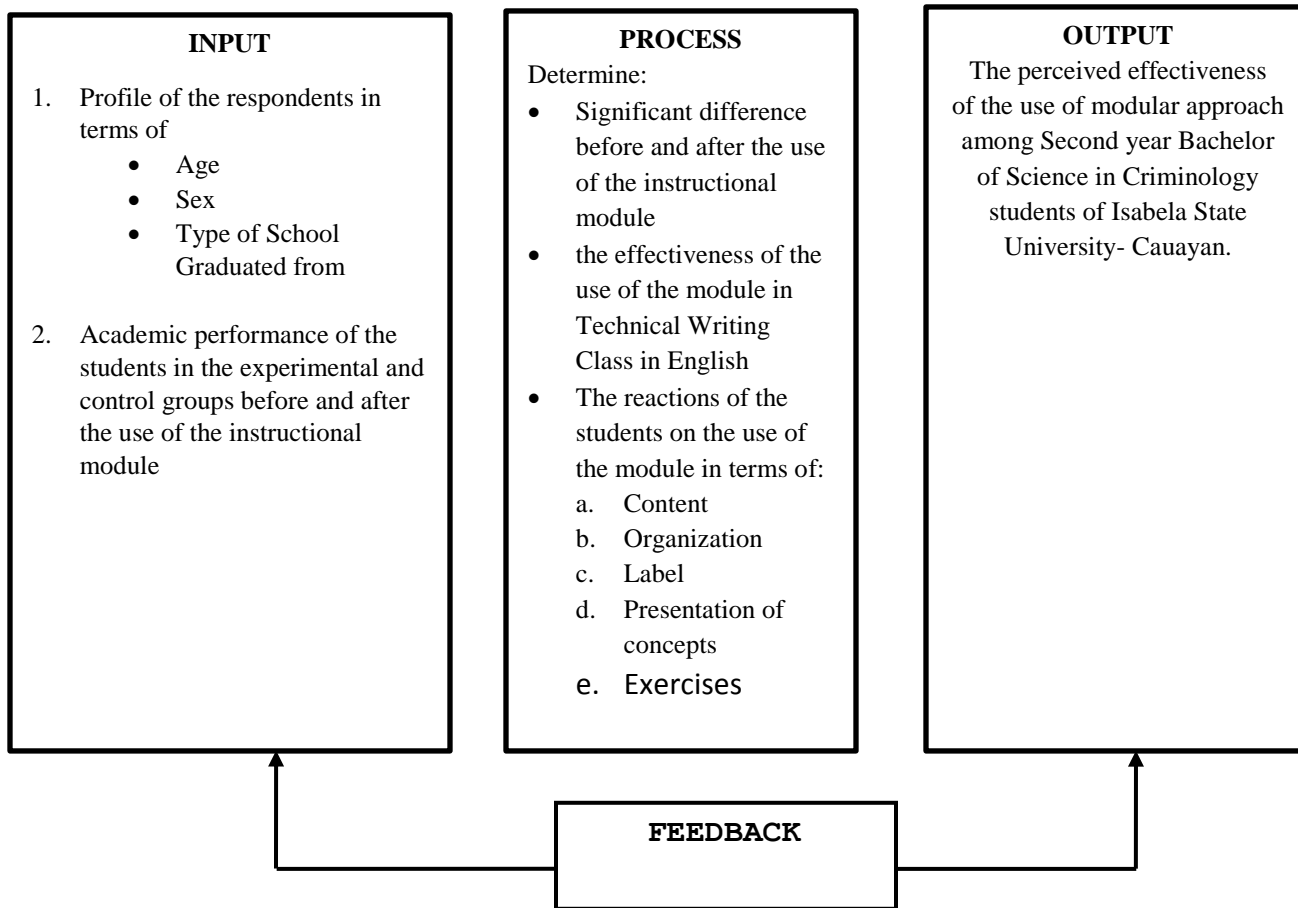


Figure 1.0 Paradigm of the Study

This research makes use of the systems analysis of input- process- output process. The *input* includes the profile of the students in terms of their age, sex, and type of school graduated from, their academic performance in the experimental and control groups before and after the use of the instructional module. The *Process* covers determining if there is a significant difference before and after the use of the instructional module, the reactions of the students on the use of the module in terms of content, organization, label, presentation of concepts, exercises and the use of module in the academic performance of the students in the experimental group. The output shows the perceived effectiveness of modular approach in teaching Technical Writing.

RESEARCH METHODOLOGY

Research Design

To determine the effectiveness of the utilization of personalized modules and to be able to make comparisons

between the use of traditional lecture-discussion and modular instruction as methods of teaching to the Criminology students of Isabela State University- Cauayan, the researcher used a two-group Pre- test/ Post- Test Quasi- experimental Design.

Respondents of the study

The respondents of the study were the Criminology students of Isabela State University – Cauayan Campus particularly the two identified second year sections who were enrolled in English 15 - Technical Writing during the First Semester of S.Y. 2016-2017.

Both groups were homogeneously grouped upon enrolment. The BS Criminology 2-2 section which is composed of 50 students was identified as the experimental group which was exposed to modular instructions. The other section or the BS Criminology 2-1 composed of 50 students also, was identified as the control group and they were exposed to the traditional method of teaching Technical Report Writing.



Data Gathering Tools

The researcher used reliable tools and valid instruments to elicit the expected accurate data for the study, namely: interview, module, and pre-post-test:

1. Interview. The researcher conducted interviews with the different English Instructors to elicit comments and suggestions for the revision and improvement of the modules to be used.
2. Modules. The modules were formulated by the researcher. Each module was patterned from the course syllabus prescribed for English 15: Technical Report Writing. This was checked and evaluated by the English specialist of ISU-Cauayan. Proper changes and necessary revisions were made after careful checking by the English specialist. Comments and suggestions of the other English specialists were also considered in the finalization of the modules. Try-outs of the modules were made to those who had taken Technical Report Writing subject but were not part of the respondent group.
3. Pre-test and post-test. The pre-test and post-test were the main instruments used in order to determine the effectiveness of the modules which served as the basis in comparing the performance levels of the respondent students using the two different methods in teaching Technical report Writing. The pre-tests and post-tests were presented to all English Instructors in ISU-Cauayan to get valuable comments and suggestions to improve these. The contents of the pre-tests and post-tests were also based on the topics in the course syllabus.
4. Questionnaire. To determine the perception of the students in the use of modules in learning Technical Writing in terms of content, organization, label, presentation of concepts and exercises, the researcher adopted and revised the instrument used by Cabrera (2010). The instrument was divided into six categories: the first category was composed of five questions evaluating the material in terms of its content; the second division contained four questions, which determined the organization of learning experiences of the module; the third division was composed of three questions about the label; the fourth division contains five questions about the presentation of concepts; the last part was composed of four questions which evaluated the material in terms of the exercises. The questionnaire was floated to the students when they finished the contents of a module.

The items were answered by the respondent-subjects using a numerical scale from 1 to 5 where 5 has the highest qualitative description as follows:

- 1 Strongly Disagree
- 2 Disagree
- 3 Somehow Agree
- 4 Agree
- 5 Strongly Agree

Data Gathering Procedures

The researcher used the course syllabus, books, and other related references in the construction and development of a module. The construction of the module was done from July to August, 2016. The first draft or the initial draft was presented to the English instructors of ISU-Cauayan for further critiquing and for comments and suggestions. The same process was also done in the construction of the pre-test and post-test. The revisions in the construction of pre-test and post-test was made based from the comments and suggestions of the English instructors. Both experimental and control groups took the pre-test and post-test of each module. Results were evaluated, analyzed, and thus was compared.

Since the second year BS Criminology respondents were composed of four sections grouped in two both of homogeneous groups, these were grouped into an experimental class and a control class. Two sections served as experimental group and the other as control group. The researcher taught the same subject with the use of the same books, the same references, and classes were in the same room and at different time schedules. Instructional methods differed in the approach to be used.

The researcher administered the post-test after exposing all the topics included in the module to the experimental group and also after using traditional methods of teaching to the control group.

Statistical Treatment of Data

The data gathered were tabulated, computed, and analyzed using the statistical tools below:

Descriptive statistics (simple frequency count and percentage) was used to describe the profile of the students in terms of their age, sex and school graduated from. T-test was used to compare the pre-test and post-test mean scores of the subjects under the experimental and control group

For further understanding of the data, the Likert scale below was used in interpreting the results of the students' reaction on the use of module and traditional lecture-discussion as methods in teaching Technical Writing.



Scale	Interval	Descriptive Interpretation
1	1.00 – 1.80	Strongly Disagree
2	1.81 – 2.60	Disagree
3	2.61 – 3.40	Undecided
4	3.41 – 4.20	Agree
5	4.21 – 5.00	Strongly Agree

Furthermore, the following arbitrary boundaries were used in interpreting the pre-test and post –test performance of the experimental and control group.

Score	Description
33-40	Outstanding
25- 32	Very Satisfactory
17- 24	Satisfactory
9-16	Good
1-8	Poor

RESULTS AND DISCUSSION

This chapter presents the analysis and interpretation of data gathered through the use of questionnaires and the pre-test

and post-test which were answered by the respondents of the study.

Table 1 shows the frequency and mean distribution of the respondents in terms of age.

Table 1. Age of the Respondents

Age	Frequency	Mean
17- 18	70	83.3
19- 20	8	9.5
21 and above	6	7.2
Total	84	100.0

Table 1 shows that out of 84 respondents of the study, 70 (83.3%) were aged 17-18; 8 (9.5%) were aged 19-20; and 6 (7.3%) were aged 21 and above.

Table 2. Sex of the Respondents

Sex	Frequency	Mean
Male	52	61.9
Female	32	38.1
Total	84	100.0

Table 2 above shows that out of 84 respondents of the study, 52 (61.9%) were male and 32 (38.1%) were female.

Table 3. Type of School Graduated

Type of School Graduated from	Frequency	Mean
Private	1	1.2
Public	83	98.8
	84	100.0



Table 3 shows that out of 84 respondents of the study, 1 (1.2%) graduated in a private school while 83 (98.8%) graduated in a public school.

Table 4. Academic Performance of the Students in Technical Writing in the Experimental and Control Groups Before and After the Use of the Instructional Module

Group		Mean	DI	SD	df	t -value	p-value	Interpretation
Without Module	Before	20.0	S	3.24	37	16.65	0.00	Significant
	After	32.4	VS	3.13				
With Module	Before	14.4	G	2.87	47	43.48	0.00	Significant
	After	33.6	O	2.72				
t- value	1.84							Not Significant
p- value	0.07							

O- Outstanding VS- Very Satisfactory S- Satisfactory G- Good

Table 4 shows the pre- test achievement mean scores of student respondents. The table above shows that the students who were taught without module had a pre- test mean score of 20.0 with a descriptive interpretation of *Satisfactory*; while the students who were taught with module had a pre- test mean score of 14.4 with a descriptive interpretation of *Good*.

This shows that the students without module got a higher pre-test mean score than that of the students with module.

The table shows the post- test achievement mean scores of students. The table shows that the students who were taught without module had a post- test mean score of 32.4 with a descriptive interpretation of *Very Satisfactory*; while the students who were taught with module had a post- test mean score of 33.6 with a descriptive interpretation of *Outstanding*.

This shows that the students with module got a higher post- test mean score than that of the students without module.

On Batulan's (2000) study, he stated that the use of learning modules enhanced the learning of the students and that modular instruction is better than the traditional method of

teaching; but the result also shows that there is no significant difference between the scores of the with module (experimental group) and without module (control group) students; thus it affirmed the study of Malana (2000) that the effectiveness of the modular instructional materials cannot be totally attributed to the module. It might be that the experimental group is better than the control group even if the sectioning was done heterogeneously.

The result also acknowledged the study of Ballesteros (2003) that the use of the modularized instruction somehow improved and enhanced the performance of the students exposed to this strategy. However, when tested, it manifested a significantly different performance among those students and that the use of module is as effective as the usual traditional lecture discussion method.

The result also shows that there is a significant difference between the pre-test and post-test scores of students thus rejecting the null hypothesis.

Table 5. Student's Response in their Reactions regarding the use of the Module in Technical Writing

A. Content	Mean	Interpretation
The content invites the interest of the learners.	4.83	Strongly Agree
The contents are suited on the learning abilities of the students.	4.75	Strongly Agree
The content stimulates the students to gain confidence in attaining high level of learning.	4.82	Strongly Agree
The contents are properly planned by the lecturer to come out with more comprehensive learning packages.	4.83	Strongly Agree
5. The topics are easily understood because the procedures are clear.	4.73	Strongly Agree
Category Mean	4.79	Strongly Agree
B. Organization		
The module furnished more comprehensive sets of learning activities enabling the students to deal with problems and become more responsible.	4.72	Strongly Agree
Each exercise is organized in a manner wherein there are connections between what the students are learning and what will learn.	4.82	Strongly Agree
The exercises are planned in an orderly sequence.	4.72	Strongly Agree



Each exercise is interrelated with other exercises.	4.59	Strongly agree
Category Mean	4.71	Strongly Agree
C. Presentation of Concepts		
Using the module, procedures are easy to follow.	4.78	Strongly agree
The language used in the module is suited for the college students.	4.81	Strongly agree
The module encourages understanding and retention of information.	4.84	Strongly agree
The module prepares the students for actual learning activities.	4.85	Strongly agree
The exposure to the module enables the students during the actual performance of various learning activities.	4.74	Strongly agree
Category Mean	4.80	Strongly Agree
D. Label		
The text used is appropriate to the students.	4.80	Strongly agree
The font style and size is clear and readable.	4.83	Strongly agree
The design is attractive and catchy.	4.65	Strongly agree
Category Mean	4.76	Strongly Agree
E. Exercises		
The content of each exercise are arranged in proper sequence.	4.79	Strongly agree
Each exercise given contains systematized knowledge and facts that were collected from various references.	4.75	Strongly agree
Each exercise used in the module was based on what has been learned in related subjects.	4.79	Strongly agree
The exercises stimulate and provoke the students to attaining high level of learning.	4.83	Strongly agree
Category Mean	4.79	Strongly Agree
Grand Mean	4.77	Strongly Agree

Analysis shows that majority of the respondents answered Strongly Agree on the statements regarding the contents of the Technical Writing module with an overall mean of 4.79.

Majority of the respondents answered Strongly Agree on the statements regarding the organization of the Technical Writing module with an overall mean of 4.71.

Majority of the respondents answered Strongly Agree on the statements regarding the label of the Technical Writing module with an overall mean of 4.76.

The respondents also answered Strongly Agree on the statements regarding the presentation of concepts of the Technical Writing module with an overall mean of 4.80.

Most of the respondents answered Strongly Agree on the statements regarding the exercises given in the Technical Writing module with an overall mean of 4.79.

The grand mean of 4.79 with a descriptive interpretation of Strongly Agree also shows that the students

who used the Technical Writing Module affirmed that the module used in the experimental group is perceived to be very effective as it is positively helpful and useful with regards to content, organization, label, presentation of concepts, and exercises.

The result also confirmed Oakes and Saunders' (2000) study that textbooks and other materials like instructional module are primary vehicles for delivering content knowledge to students; as such textbooks and curriculum materials, in large part, determine what students do and not to learn thus they insisted that student's access to content knowledge requires more than specified instructional program and skillful teacher.

DISCUSSION OF RESULTS

Based on the analysis done, the following are the findings:



The results show that most of the respondents of the study (70 or 83.3%) were aged 17-18; most of them were 52 (61.9%) males and most of them 83 (98.8%) graduated in a public school.

Results also showed that there is a significant difference between the pre- test and post-test achievement scores of students and the students' who were taught without module got a higher pre- test mean score than that of the students with module.

The students with module (experimental group) got a higher post- test mean score than that of the students without module (control group), thus implies that the use of learning modules enhanced the learning of the students and that modular instruction is better than the traditional method of teaching.

There is no significant difference between the scores of with module (experimental group) and without module (control group) students thus affirms that the effectiveness of the modular instructional materials cannot be totally attributed to the module (Malana, 2000); and it also confirms that that the use of the modularized instruction somehow improved and enhanced the performance of the students exposed to this among strategy. However, when tested, it manifested a significantly different performance among those students and that the use of module is as effective as the usual traditional lecture discussion method (Ballesteros, 2003).

The result also shows that the students perceived that the use of the Technical Writing Module is said to be very effective as it with regards to content, organization, label, presentation of concepts, and exercises that affirms the study of Oakes and Saunders (2000) instructional modules are primary vehicles for delivering content knowledge to students.

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. Aside from the module itself, there are other factors (like the teacher factor, and the groupings) that could contribute to the high performance of students in Technical Report Writing.
2. Instructional modules are primary vehicles for delivering content knowledge to students.
3. The use of instructional modules greatly enhance learning.

Recommendations

From the foregoing conclusions, the following are recommended:

1. For the teachers. In order to ensure an effective teaching learning process, it is important for the teacher to be thoroughly acquainted with the teaching resources and services available to him.
2. For the students. Teaching materials can support student learning and increase student success thus the

teaching materials should be tailored to the content in which they're being used, to the students in whose class they are being used, and to the teacher.

3. For curriculum planners. Teaching materials support student's learning, thus instructional modules are an important feature of any university course; thus it should be made available.
4. For future researchers. Studies on the use of modular approach in teaching on other content areas such as Science and Mathematics may be conducted to further measure the effectiveness of this approach in the classrooms.

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